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An exploratory study on the relationship between organizational innovation and performance of non-profit organizations in Saudi Arabia

Abdulsattar Almujaiheem Alshammari[a*], Amran Rasli[b], Majeedah Alnajem[c] Azlin Shafinaz Arshad[d]

[a,b]*Faculty of Management, Universiti Teknologi, Malaysia*
[c]*College of Arts, King Saud University, Kingdome of Saudi Arabia*
[d]*Malaysian Academy of SME & Entrepreneurship Development (MASMED), Universiti Teknologi MARA, Malaysia*

Abstract

This article is based on an exploratory study using a survey question which was responded by 33 non-profit organizations (NPOs) in Saudi Arabia. The study seeks to assess the relationship between organizational innovation which is represented by five dimensions and organizational performance. After data were collected, reliability tests and descriptive analyses followed by correlation and regression analyses were conducted. Models developed were tested for multicollinearity following which two dimensions of organization innovation in the form of innovative process and innovative learning were found to be excellent predictors of organizational performance following which, conclusions were derived accordingly.

Keywords: Organization innovation; organizational performance; non-profit organizations

* Corresponding author. Tel: +966553873664.
E-mail address: ssattaredu@hotmail.com

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1. Introduction

Innovation has a considerable role in the contemporary business environment. Innovation is the development of new customer's value through solutions that meet new needs, articulate needs or fulfilling existing customers and market needs in new ways (Jaskyte, 2011). Innovation is considered as the added value activity for organizational performance in the era of the twenty first century (Pfeffer and Sutton, 2000). In this article the interplay between organizational innovation and performance will be discussed and tested accordingly within the setting of Saudi Arabia non-profit organizations (NPOs). Like in other countries, Saudi Arabia non-profit sector have been stigmatized as having weak management skills, frequently tight budgets and the never ending challenges of reaching scale as compared to those in the for-profit sector. To overcome this stigma, Berger and Kohomban (2013) believed that the value proposition in the non-profitization of business should fall into at least two important categories: workforce and corporate model evolution in order to achieve a higher level of organizational performance.

2. Literature Review

Through literatures, it appears that researches of innovation are intensive in the area of business, while so much work needed to be done in the field of the non-profit firms (Walker, 2005). This results in a research gap in knowledge for the non-profit practitioners and scholars (Jaskyte, 2011). Jaskyte (2011) believes that innovation is an essential characteristic of the non-profit firms that are more flexible and adoptable than the other firms because they are not driven by the "bottom line".

Innovations have been studied from many different dimensions such as economics, business, technology, finance and management. They have enhanced this area of study and to enable future researchers to get a better consideration of the innovation process. The prevalent discussion among practitioners of innovation has created many approaches to conceptualize innovation. Innovation can be referred to as an act of introducing something new (process of innovation); or something introduced newly (product; or object). For example, Carol and Mavis (2007) described innovation as an idea, practice or object that apparent as recent by people or the adoption unit.

Organizational innovation has been a dominant factor in maintaining worldwide competitiveness. It fuels organizational growth, drives future success, and is the engine that allows businesses to sustain their performance in a global economy (Gaynor, 2002). Some studies have identified business performance as a multidimensional construct (Walker & Ruekert, 1987; Wiklund & Shepherd, 2005). According to Wiklund (1999), growth and financial performance is a common performance measurement and different firms in different countries emphasize and focus on different measurement. Recognizing that a firm's performance is multidimensional and following the suggestion of Wiklund (1999), this study will adopt other forms of measurement of business performance other than growth and financial perpectives. Finally, Jaskyte (2011) found that there is a positive relationship between innovation and performance, which creates the need in the non-profit firms to build the culture of innovation in order to improve the performance.

3. Methodology

This exploratory study used a questionnaire which comprised of three sections: demography, organizational innovation and organizational performance based on the perceptions of the top management of the NPOs in Saudi Arabia. For measuring organizational innovation, this study adopts the instrument developed by Tidd and Bessant (2009) which consists of the following dimensions: innovation

strategy (8 items), organization linkages (8 items), innovation process (8 items), organization learning (8 items) and organizational structure (8 items). Organizational performance is examined based on five dimensions representing the Balanced Scorecard Methodology as follows: mission attainment (7 items) as recommended by Kaplan and Norton (2000); the customer perspective (9 items) as per the study of by Kaplan and Norton (2000); internal process perspective (9 items) as per the studies of Niven (2003) and Kaplan and Norton (2000); employees learning and growth (9 items) as per the study of Blackman (2008) and Alshweekh (2007); and financial perspective (5 items) as per the study of Niven (2003). Finally, the demography comprise of measurement of the years of establishment, size and classification of the NPO.

After pilot testing, the questionnaires were distributed to 60 NPOs of which only 38 responded. Upon review, only 33 were usable for further analysis. Data were analyzed to assess the correlation of the five dimensions of organizational innovation dimensions with the aggregate value of organizational performance. Initially, descriptive analyses were conducted to determine if the sample is a fair representation of the population parameter. The small sample size qualifies this research to be classified as an exploratory study (Kang, Wu & Gould, 2005). Subsequently, Pearson correlation analyses were conducted for the five dimensions of organizational innovation against organizational performance as a replication of a study by Tanewski, Prajogo and Sohal (2003). Finally stepwise regression was used to predict organization performance as per the recommendation by Subrahmanya (2011).

4. Findings

4.1. Descriptive Analysis

Descriptive analysis on the demographic information is presented in Table 1. Most of the Saudi NPOs have been established for more than 16 years (48.5%), operate with more than 50 employees (57.6%) and are involved in activities related to health and human services organization (21.2%) as well as culture and humanities (21.2%) related activities.

Table 1: Descriptive Analysis on the Demographic Information

Demography	Frequency	Percent
Years of establishment		
• 0-5 years	7	21.2
• 6-10 years	6	18.2
• 11-15 years	4	12.1
• More than 15 years	16	48.5
Number of employees (size of NPO)		
• Less than 10 employees	2	6.1
• Between 11 and 50 employees	12	36.4
• More than 50 employees	19	57.6
Organizational classification		
• Arts organization	5	15.2
• Culture and humanities	7	21.2
• Education and research	5	15.2
• Environment and animals	4	12.1
• Health and human services	7	21.2
• International	3	9.1
• Others	2	6.1

Subsequently, reliability and descriptive analyses were conducted for each of the constructs with multivariate measures. To measure the internal consistency of the multivariate scales, Cronbach's alpha was used (Nunnally, 1978). In this study, the Cronbach's α of each constructs is greater than 0.7 (Table 2), suggesting a strong reliability for the survey instrument (Guilford, 1965). In addition, based on Table 2, it is apparent that the mean performance of the Saudi Arabia NPOs is 4.0376, while the mean for the 5 dimensions of organizational performance vary from 3.8295 (organization linkages) to 4.0606 (innovation process).

Table 2: Descriptive Statistics and Reliability Coefficients of Constructs

Constructs	Mean	Std. Deviation	N	Cronbach's α
Meaninnovstrat	4.0076	.57532	33	.740
Meaninnovproce	4.0606	.58054	33	.807
Meaninnovstruc	3.9621	.63159	33	.813
Meaninnovlink	3.8295	.60903	33	.806
Meaninnovlearning	3.9015	.62168	33	.748
Meanperformance	4.0376	.39225	33	.850
		Overall Cronbach's alpha		.857

4.2. Correlation and Regression Analyses

The result of the correlation analysis is presented in Table 3. Based on the correlation coefficient for the five dimensions of organizational innovation against performance, it is apparent that the highest two coefficients of correlation with performance is innovative process (r = 0.657) and innovative learning (r = 0.598) with innovative structure being the only dimension with no correlation at all (r = 0.274).

Table 3: Correlation Matrix (N=33)

		Mean innovstrat	Mean innovproce	Mean innovstruc	Mean innovlink	Mean innovlearn	Mean performance
Mean innovstrat	Pearson Correlation	1	.561**	.458**	.376*	.520**	.421*
	Sig. (2-tailed)		.001	.007	.031	.002	.015
Mean innovproce	Pearson Correlation	.561**	1	.466**	.294	.476**	.657**
	Sig. (2-tailed)	.001		.006	.097	.005	.000
Mean innovstruc	Pearson Correlation	.458**	.466**	1	.626**	.515**	.274
	Sig. (2-tailed)	.007	.006		.000	.002	.123
Mean innovlink	Pearson Correlation	.376*	.294	.626**	1	.562**	.394*
	Sig. (2-tailed)	.031	.097	.000		.001	.023
Mean innovlearn	Pearson Correlation	.520**	.476**	.515**	.562**	1	.598**
	Sig. (2-tailed)	.002	.005	.002	.001		.000
Mean performance	Pearson Correlation	.421*	.657**	.274	.394*	.598**	1
	Sig. (2-tailed)	.015	.000	.123	.023	.000	

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

The stepwise regression analysis was able to generate two models (refer Table 4). Both models are significant (refer Table 5), but model 2 is deemed as superior due to the higher R^2 value (0.537). As such, the good predictors for organizational performance are innovative process and innovative learning.

Table 4: Preliminary Results of the Stepwise Regression

					Change Statistics				
Model	R	R^2	Adjusted R^2	Std. Error of the Estimate	R^2 Change	F Change	df1	df2	Sig. F Change
1	.657[a]	.432	.413	.30048	.432	23.531	1	31	.000
2	.733[b]	.537	.506	.27560	.106	6.850	1	30	.014

a. Predictors: (Constant), meaninnovproce
b. Predictors: (Constant), meaninnovproce, meaninnovlearn

Table 5: ANOVA[c]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.125	1	2.125	23.531	.000[a]
	Residual	2.799	31	.090		
	Total	4.924	32			
2	Regression	2.645	2	1.322	17.411	.000[b]
	Residual	2.279	30	.076		
	Total	4.924	32			

c. Predictors: (Constant), meaninnovproce
d. Predictors: (Constant), meaninnovproce, meaninnovlearn
e. Dependent Variable: meanperformance

Finally, based on Table 6, the relationship between organizational performance and the two dimensions representing organizational innovation, i.e. innovative process and innovative learning can best be represented by the following equation:

Performance = 1.808 + 0.325(Innovative Process) + 0.233 (Innovative Learning)

The strength of the aforementioned equation is evident due to the absence of multicollinearity problems due to the low Variance Inflation Factors (VIF). This is in accordance to recommendations by Kmieciak, Michna and Meczynska (2012).

Table 6: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.235	.375		5.958	.000		
	meaninnovproce	.444	.091	.657	4.851	.000	1.000	1.000
2	(Constant)	1.808	.381		4.746	.000		
	meaninnovproce	.325	.095	.481	3.407	.002	.774	1.292
	meaninnovlearn	.233	.089	.370	2.617	.014	.774	1.292

a. Dependent Variable: meanperformance

5. Conclusion

In the present study, the authors tried to approach a sector of the economy which is often neglected, the NPOs, which impacts the quality of life in Saudi Arabia. Through the proper transformation of the data set derived from a survey questionnaire and the development of a regression model (linear regression), the authors were able to predict the performance of Saudi Arabia NPOs based on a systematic and robust approach in data analysis.

Because this study only investigated the perceptions of top management of NPOs in Saudi Arabia during a specific time, the study's findings may be limited. The top management's perceptions may differ based on the nature of operation of the NPO. Therefore, caution should be exercised in interpreting the results. Furthermore, the relatively small sample size and the exploratory nature of the study may bias the results. Future studies should use larger, more diverse samples from various geographic regions and differing types of NPOs to validate these results.

This research confirms the existence of two dimensions of organizational innovation i.e. innovative process and innovative learning, and their role in predicting organizational performance. However, this study is limited to Saudi Arabia NPOs only. Future research can be performed in other developing countries as well. Due to the important role of NPOs to create a holistic economy, a comprehensive research can also be conducted in the future using other dimensions such as leadership styles and strategic management practices.

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